

# PATENT COOPERATION TREATY

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## NOTIFICATION OF TRANSMITTAL OF INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Rule 71.1)

Date of Mailing  
(day/month/year)

**20 DEC 1999**

Applicant's or agent's file reference

F-3373-PC

### IMPORTANT NOTIFICATION

International application No.

PCT/US98/15986

International filing date (day/month/year)

31 JULY 1998

Priority Date (day/month/year)

01 AUGUST 1997

Applicant

SCIENTIFIC-ATLANTA, INC.

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.

2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.

3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.

#### 4. REMINDER

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices)(Article 39(1))(see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

Name and mailing address of the IPEA/US  
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# PATENT COOPERATION TREATY

## PCT

### INTERNATIONAL PRELIMINARY EXAMINATION REPORT

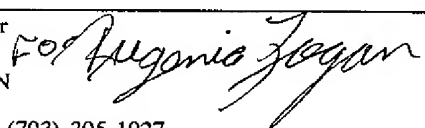
(PCT Article 36 and Rule 70)

Applicant's or agent's file reference <b>F-3373-PC</b>	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. <b>PCT/US98/15986</b>	International filing date ( <i>day/month/year</i> ) <b>31 JULY 1998</b>	Priority date ( <i>day/month/year</i> ) <b>01 AUGUST 1997</b>
International Patent Classification (IPC) or national classification and IPC <b>IPC(6): HO4N 7/16 and US Cl.: 380/04</b>		
Applicant <b>SCIENTIFIC-ATLANTA, INC.</b>		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This ~~REPORT~~ consists of a total of 6 sheets.  
☒ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority. (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).  
 These annexes consist of a total of 0 sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of report with regard to novelty, inventive step or industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand  <b>26 FEBRUARY 1999</b>	Date of completion of this report  <b>06 DECEMBER 1999</b>
Name and mailing address of the IPEA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231	Authorized officer <div style="text-align: center;">   <b>TOD SWANN</b> </div>
Facsimile No. (703) 305-3230	Telephone No. (703) 305-1027

**I. Basis of the report**

1. This report has been drawn on the basis of *(Substitute sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to the report since they do not contain amendments):*

- ☒ the international application as originally filed.
- ☒ the description, pages 1-78 , as originally filed.  
pages NONE , filed with the demand.  
pages NONE , filed with the letter of \_\_\_\_\_  
pages \_\_\_\_\_ , filed with the letter of \_\_\_\_\_
- ☒ the claims, Nos. 1-30 , as originally filed.  
Nos. NONE , as amended under Article 19.  
Nos. NONE , filed with the demand.  
Nos. NONE , filed with the letter of \_\_\_\_\_  
Nos. \_\_\_\_\_ , filed with the letter of \_\_\_\_\_
- ☒ the drawings, sheets/fig 1-21 , as originally filed.  
sheets/fig NONE , filed with the demand.  
sheets/fig NONE , filed with the letter of \_\_\_\_\_  
sheets/fig \_\_\_\_\_ , filed with the letter of \_\_\_\_\_

2. The amendments have resulted in the cancellation of:

- ☒ the description, pages none
- ☒ the claims, Nos. none
- ☒ the drawings, sheets/fig none

3. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the ~~Supplemental Box~~ Additional observations below (Rule 70.2(c)).

4. Additional observations, if necessary:

NONE

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement****1. STATEMENT**

Novelty (N)	Claims <u>1-30</u>	YES
	Claims <u>NONE</u>	NO
Inventive Step (IS)	Claims <u>NONE</u>	YES
	Claims <u>1-30</u>	NO
Industrial Applicability (IA)	Claims <u>1-30</u>	YES
	Claims <u>NONE</u>	NO

**2. CITATIONS AND EXPLANATIONS**

Claim 1 lacks an inventive step under PCT Article 33(3) as being obvious over Handelman in view of Chorley. Handelman teaches a port for receiving an encrypted service instance and entitlement information (col. 5, line 15-36), a memory for storing a coordinate system on which a geographic indicator indicative of the geographic location is plotted (col. 5, line 49-54), and a microprocessor coupled to the secure element and the memory activating display of the service instance (col. 6, line 46-60).

Claim 2 lacks an inventive step under PCT Article 33(3) as being obvious over the prior art as applied in the immediately preceding paragraph and further in view of Handelman and Bednarek. Further, Handelman teaches determining that the receiver is not entitled to the service instance (col. 5, line 28-36). Bednarek teaches a multiplexer/scrambler/transmitter receiving audio, video, and data packets combining the different signals in a compression scheme (col. 8, line 52-60).

Claim 3 lacks an inventive step under PCT Article 33(3) as being obvious over the prior art as applied in the preceding paragraph- claim 1 and further in view of Bednarek. Bednarek (5,621,793) teaches a geographic position being held in memory (col. 12, line 35-37).

Claim 4 lacks an inventive step under PCT Article 33(3) as being obvious over the prior art as applied in the immediately preceding paragraph and further in view of Bednarek. Bednarek (5,621,793) teaches access upon satisfaction of criteria, having GPS data as one of the criteria for release of the descramble key/components (col. 9, line 50-61).

Claim 5 lacks an inventive step under PCT Article 33(3) as being obvious over the prior art as applied in the immediately preceding paragraph and further in view of Bednarek. Further, Handelman teaches the blackout/spotlight field indicates whether the service instance is geographically limited and whether the service instance is limited to within a particular geographic region (col. 5, line 30-36).

(Continued on Supplemental Sheet.)

**Supplemental Box**

(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of: Boxes I - VIII

Sheet 10

**V. 2. REASONED STATEMENTS - CITATIONS AND EXPLANATIONS (Continued):**

Claim 8 lacks an inventive step under PCT Article 33(3) as being obvious over the prior art as applied in the immediately preceding paragraph- claim 1 and further in view of Bednarek. Bednarek (5,621,793) teaches the area being expressed in GPS coordinates (col. 12, line 33-41). Bednarek (5,621,793) teaches position coordinates: X, Y, Z, and R (range) (col. 10, line 20-43).

Claim 9 lacks an inventive step under PCT Article 33(3) as being obvious over the prior art as applied in the immediately preceding paragraph- claim 1 and further in view of Bednarek. Bednarek teaches position coordinates: X,Y,Z, and R (range) to allow for the mapping and plotting of the location/area.

Claim 10 lacks an inventive step under PCT Article 33(3) as being obvious over the prior art as applied in the immediately preceding paragraph- claim 1 and further in view of Bednarek. Bednarek (5,621,793) teaches the release of the decryption key if the correct geographic location is verified (col. 9, line 62-67).

Claim 12 lacks an inventive step under PCT Article 33(3) as being obvious over the prior art as applied in the immediately preceding paragraph- claim 1 and further in view of Bednarek. Bednarek (5,621,793) teaches a memory for storing a geographic coordinate system on which is plotted a geographic indicator indicative of a location of a terminal (col. 12, line 32-41) and an entitlement agent coupled to the plurality of receivers for providing the encrypted service instance and entitlement information (col. 10, line 35-55). Handelman (5,414,773) teaches of a multiplicity of subscriber units (col. 4, line 56-62), subscribers receiving encrypted information and an address to identify the intended recipients (col. 5, line 15- 36), and a processor coupled to a memory and memory controller (col. 6, line 46-60).

Claim 16 lacks an inventive step under PCT Article 33(3) as being obvious over the prior art-claim 1 as applied in the immediately preceding paragraph and further in view of Bednarek. Further, Bednarek (5,621,793) teaches a communication medium for coupling the entitlement agent to the plurality of set top terminals (col. 12, line 32-41).

Claim 17 lacks an inventive step under PCT Article 33(3) as being obvious over the prior art- claim 1 as applied in the immediately preceding paragraph and further in view of Bednarek. Further, Bednarek (5,621,793) teaches a conditional access system wherein the entitlement information includes the geographic location information in the form of an x centroid, a y centroid, and a radius value (col. 10, line 20-55).

Claim 18 lacks an inventive step under PCT Article 33(3) as being obvious over the prior art- claim 1 as applied in the immediately preceding paragraph and further in view of Bednarek. Further, Bednarek (5,621,793) teaches a conditional access system further comprising additional entitlement agents for sending additional geographic location information (col. 10, line 50-67).

Claim 19 lacks an inventive step under PCT Article 33(3) as being obvious over the prior art- claim 1 as applied in the immediately preceding paragraph and further in view of Bednarek. Further, Bednarek (5,621,793) teaches a conditional access system is stored by the receiver in the form of a bitmap (col. 12, line 35-37).

Claims 20 lacks an inventive step under PCT Article 33(3) as being obvious over Bednarek in view of Handelman. Bednarek (5,621,793) teaches a bitmap representing a geographic coordinate system (col. 12, line 35-37), assigning means for assigning a geographic limitation for a service instance (col. 10, line 20-67), a transmitter for transmitting the service instance and geographic information (col. 9, line 50-60 and col. 10, line 1-15). Handelman (5,414,773) teaches data encryption at the transmitter for the addressee is able to decrypt the data (col. 7, line 15-21).

Claim 21 lacks an inventive step under PCT Article 33 (3) as being obvious over Handelman. Handelman (5,414,773) teaches of a coded address information generator for transmitting encrypted information (col. 5, line 8-14).

Claims 22 and 26 lack an inventive step under PCT Article 33 (3) as being obvious over Bednarek. Bednarek (5,621,793) teaches claim 20. Handelman (5,414,773) teaches decrypting only the information from the generator which is addressed appropriately (col. 5, line 32-36).

Claim 26: Bednarek teaches the spotlight information indicates that the service reception component is only to decrypt the service instance when the location of the service reception component is within a geographic region indicated by the geographic information (col. 9, line 62-67).

**Supplemental Box**

(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of: Boxes I - VIII

Sheet 11

Claims 6 and 7 lack an inventive step under PCT Article 33(3) as being obvious over the prior art as applied in claim 1 and further in view of Bednarek and Thibadeau.

Claim 6: Bednarek (5,621,793) teaches a demultiplexer/descrambler (col. 9, line 45-56) and the proper geographic position is determined by a GPS data processor (col. 10, line 1-7). It would have been obvious to modify Handelman's CATV system to include Bednarek's decryptor and geographic determinator to allow the proper signal to be received when in the appropriate geographic area. Thibadeau (5,565,909) teaches a geographic property with dimensions designated as a region (col. 7, line 52-67).

Claim 7: Bednarek (5,621,793) teaches the decryption key released if at its proper geographical position (col. 9, line 62-67). It would have been obvious to modify Handelman's CATV system to include Bednarek's decryption to allow for the receiver to display the transmission for the user. Thibadeau (5,565,909) teaches a geographic property with dimensions designated as a region (col. 7, line 52-67) and a location designation which upon forming an intersection produces an empty area if outside the appropriate geographical are (col. 14, line 28-57).

Claim 11 lacks an inventive step under PCT 33 (3) as being obvious over the prior art as applied in Thibadeau. Thibadeau (5,565,909) teaches a geographic property with dimensions designated as a region (col. 7, line 52-67) and a location designation which upon forming an intersection produces an empty area if outside the appropriate geographical are (col. 14, line 28-57).

Claim 13 and 14 lack an inventive step under PCT 33 (3) as being obvious over the prior art as applied in Thibadeau.

Claim 13: Thibadeau (5,565,909) teaches the encoding of information to define a geometric property and a location designation which upon forming an intersection produces an empty area if outside the appropriate geographical are (col. 14, line 28-57).

Claim 14: Thibadeau (5,565,909) teaches a location designation which upon forming an intersection produces an empty area if outside the appropriate geographical are (col. 14, line 28-57).

Claim 15 lacks an inventive step under PCT 33 (3) as being obvious over the prior art as applied in Bednarek. Bednarek (5,621,793) teaches the position authorization and condition access depend on the position of the device (col. 10, line 1-67).

Claim 23 lacks an inventive step under PCT Article 33(3) as being obvious over Handelman in view of Thibadeau. Thibadeau (5,565,909) teaches of vehicles each possessing a reporting unit (col. 20, line 36-67), it would have been obvious to modify Bednarek's TV set top with GPS to include Thibadeau's multi-user entitlement agents to allow each user to authorize themselves based upon their location.

Claim 24 and 25 lack an inventive step under PCT Article 33(3) as being obvious over Thibadeau.

Claim 24: Thibadeau (5,565,909) teaches location designation which upon forming an intersection produces an empty area if outside the appropriate geographical are (col. 14, line 28-57).

Claim 25: Thibadeau teaches a location designation which upon forming an intersection produces an empty area if outside the appropriate geographical are (col. 14, line 28-57).

Claim 27 lacks an inventive step under PCT Article 33(3) as being obvious over Bednarek in view of Thibadeau and Chorley. Bednarek (5,621,793) teaches an entitlement agent coupled to the receiver for entitling the receiver to display the service instance (col. 9, line 40-48), receiving bit map information for generating and storing a geographic coordinate system (col. 12, line 35-37), receiving an encrypted service instance and entitlement information (col. 9, line 62-67), decoding geographic location information from the entitlement information (col. 9, line 45-52), determining from any intersection between the geographic location information and the geographic indicator (col. 10, line 63-67), and decrypting the encrypted service instance (col. 9, line 62-67). Thibadeau (5,565,909) teaches displaying the message on a screen, the message being a geographic location (col. 14, line 46-57). Chorley (4,649,533) teaches the generation of graphic information on the receiver (col. 23, line 65-68 and col. 24, line 1-7).

**Supplemental Box**

(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of: Boxes I - VIII

Sheet 12

Claim 28 lacks an inventive step under PCT Article 33(3) as being obvious over Bednarek in view of Thibadeau. Bednarek teaches the determining step comprises the step of determining that the receiver is entitled (col. 9, line 62-67 and col. 10, line 1-8). Thibadeau (5,565,909) teaches a geometric property which may have two or more dimensions, designated as a region (col. 7, line 52-67).

Claim 29 lacks an inventive step under PCT Article 33(3) as being obvious over Thibadeau. Thibadeau (5,565,909) teaches a geometric property which may have two or more dimensions, designated as a region (col. 7, line 52-67) and the region's intersection is empty control flows to an alternate process (col. 14, line 34-57).

Claim 30 lacks an inventive step under PCT Article 33(3) as being obvious over Bednarek in view of Thibadeau. Bednarek teaches storing the geographical coordinate system in the memory (col. 12, line 32-41) and decoding the geographic location information to recover an x, y, and radius defining a geographic region (col. 9, line 62-67 and col. 10, line 20-67). Thibadeau (5,565,909) teaches the determination of the intersection of the region and describes the geometry of the region of interest (col. 14, line 1-11 and col. 16, line 18-54).

## ----- NEW CITATIONS -----

US 5,414,773 A (Handelman) 09 MAY 1995, see column 4-6, lines 1-62

US 5,565,909 A (Thibadeau et al.) 15 OCTOBER 1996, see column 7-20, line 1-67

US 4,649,533 A (Chorley et al.) 10 MARCH 1987, see column 21-24, line 1-68